mitigation measure would be offset by an increase in impacts related to surface-laying the cable in these areas. **1-9, cont.**

10. The DEIR/DEIS acknowledges that sandy, unconsolidated sediments exist in the area where Horizontal Directional Drilling ("HDD") is proposed, and that these sediments pose a high risk for inadvertent return of drilling fluids to the surface ("frac-out"). The document does not, however, contain detailed information mapping these geological units and the depth to bedrock. Please include the following information in the final EIR/EIS:
    - Geological information from at least three borings--one at either end of the bore, and at least one in the middle. This may not be practical for ocean bores
    - If necessary, additional work (seismic reflection, seismic data, ground penetrating radar, etc.) to further characterize the stratigraphy along the proposed bore.
    - Recommended drilling horizons; recommendations on possible use of casing at entry bore
    - A geologic cross section based on the above data, showing the proposed bore
    - Discussion of special drilling conditions that may be encountered (cobbles, unconsolidated sands, etc.)
    - Discussion of existing fractures, and recommendations on how to minimize risk of inadvertent return of drilling fluids to surface
    - Any other geological information that would help the drilling contractor avoid frac-outs; and recommendations for minimizing the risk of a frac-out

    1-10

    Some or all of this information may be contained in the separate document "Shore Landing Options and HDD Documentation," however please include it in the final EIR/EIS. This information will be a requirement of a coastal development permit for the bore.

    The Coastal Commission, pursuant to sections 30230, 30231, and 30253 of the Coastal Act, routinely requires HDD operations to be undertaken in such a way as to minimize the risk of a frac-out. The Commission will likely require that the HDD bore maintain a minimum depth of 100 feet below the ocean floor at all points, except near the bore entry and exit points. These depths should be measured relative to the ocean floor, not sea level.

Section 4.5: Biological Resources

11. Please indicate if cable-laying operations will be conducted during nighttime hours. If so, please describe how marine mammal monitors will detect marine mammals after dark, before the animals enter the safety zone. Please provide more detail concerning the protocols that will be followed by marine mammal monitors. **1-11**

12. The document does not describe a protocol to be followed in the case of an accidental injury or other take of marine mammals. Please develop a reporting and recovery protocol, describe it in the document, and include the protocol in the document's analysis of potential impacts to marine mammals. **1-12**

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13. "Ghost nets" – nets that have been abandoned because they have snagged on the cable – can become an entanglement hazard to marine life. Please develop a protocol for retrieving fishing gear that has become entangled in the cable and subsequently abandoned. The protocol should specify a timeframe within which gear retrieval will be attempted, and should be incorporated into the Mitigation Monitoring Plan. **1-13**

Impacts to Hard bottom Habitats (pp. 4.5-20 to 4.5-21)

14. Please estimate the total square footage of hard bottom habitat that will be impacted by the project. **1-14**

15. Please indicate if the cable will be suspended at any location along the proposed route. If so, please describe the anticipated length and height of the suspension. **1-15**

16. Please indicate if the cable is likely to move in areas where it will not be buried. If so, please indicate the amount of anticipated movement (in total square feet) and any impacts strumming will have on the local environment. **1-16**

17. On page 4.5-20, line 27, the document states: "Careful installation and post-lay inspection/adjustment of the cable, particularly in high-relief areas, to ensure appropriate slack and following of bottom contours would ensure minimal disturbance of hard bottom habitat." Please be more specific regarding what measures will be implemented to avoid or minimize suspended cable segments and disturbance of hard bottom habitat. **1-17**

Impact MBR-3: Collision with a Marine Mammal (page 4.5-24)

18. Line 26 states: "Following the injury of [a] grey whale calf, a cable research report was produced that included recommendations from marine mammal monitors [regarding] additional measure to reduce the chances of injury to marine mammals during cable installation." Please provide a citation for this report, and summarize the recommendations contained in it. Please indicate if any or all of the recommendations have been incorporated into the proposed project, and if not, why not. **1-18**

Impact MBR-4: Disturbance of Marine Mammals by Noise or Cable Lay Operations

19. We suggest you re-title this section as "Impacts to marine mammals from noise associated with project activities." Project activities that could potentially cause noise-related impacts to marine mammals include, at least, cable-lay operations. No data is provided in the document regarding potential noise impacts from other project activities, such as HDD. Please indicate if other project activities, including HDD, will generate noise that could a) be transmitted underwater, and/or b) be sufficiently high level to cause impacts to marine mammals. **1-19**

20. Figure 4.5-2: Expected Seasonal Occurrences of Marine Mammal Species Along the Cable-Laying Path, on page 4.5-10, indicates that both Cuvier's beaked whale and **1-20**

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Hubb's beaked whale could be present along the proposed cable route during cable laying activities. The potential impact of noise on these two species has not been analyzed in the document. Please describe the behavior of these species relevant to potential noise impacts. How deeply and for how long do these species dive? How likely is it that the on-board monitors will detect individuals of these species before they enter the 500-foot safety zone, especially in very deep water? **1-20, cont.**

21. Please characterize in more detail the noise produced by the plow. What is the sound frequency range produced by the plow? What will be the noise attenuation at 500-feet – the proposed limit of the safety zone? **1-21**

22. In deep water, how will marine mammal monitors detect deep- and/or long-diving whales before they enter the safety zone? **1-22**

23. Two types of whales are of special concern when reviewing potential impacts due to the noise associated with the plow: deep- and/or long-diving whales, and those animals especially sensitive to the particular type of noise produced by the plow (for example, whales with a special sensitivity to low-frequency sound, if this is the type of sound produced by the plow). This section of the document should identify which species of whale falls into each category, and describe potential impacts and mitigation measures to ensure that these species will be protected. **1-23**

Section 4.6: Marine Water Quality

24. The Coastal Act and the Marine Sanctuary regulations should be included as part of the regulatory framework discussed in this section. **1-24**

25. Increases in turbidity can degrade water quality by, among other things, interfering with filter-feeding benthic organisms sensitive to increased turbidity. Please identify any filter-feeding benthic organisms present at the project site that may be adversely impacted by increases in turbidity. **1-25**

26. Please indicate if any sediment that will be re-suspended by project activities may be contaminated with DDT, PCBs, and/or heavy metals. If so, please analyze the impacts re-suspending these sediments might have on water quality and the benthic environment. **1-26**

27. As discussed in Comment #3 above, please develop an Oil Spill Prevention Plan and include it in the final EIR/EIS. The plan should identify the reasonable worst-case discharge, oil spill prevention measures, and procedures to be followed in the event of an accidental spill. If the applicant intends to enter into a contract for on-water containment and recovery, this fact should be included in the document's analysis. **1-27**

Other comments:

28. The document does not discuss potential impacts to public access and recreation. Please provide a description of typical on- and offshore recreational activities (e.g., boating, **1-28**

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kayaking, swimming) in the area surrounding the project site. Please inventory public access to the beach in the area, as well as public parks, open space, etc. Please analyze whether project activities have the potential to adversely impact public access and recreation, either temporarily during construction activities or over the long-term operation of the project.

1-28, cont.

Please feel free to contact me if you have any questions regarding this letter. I can be contacted by mail at the letterhead address, by phone at (415) 904-5249, and by e-mail at amccombs@coastal.ca.gov.

Sincerely,

Audrey McCombs
Analyst, Energy and Ocean Resources Unit

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